UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,238	03/10/2004	Rajeev B. Rajan	MSFT-2924/306986.01	2995

41505 7590 07/26/2007	EXAMINER
WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION)	
CIRA CENTRE, 12TH FLOOR	TIMBLIN, ROBERT M
2929 ARCH STREET	
PHILADELPHIA, PA 19104-2891	

ART UNIT	PAPER NUMBER
2167	

MAIL DATE	DELIVERY MODE
07/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/797,238	RAJAN ET AL.
	Examiner	Art Unit	
	Robert M. Timblin	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 May 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

This Office Action corresponds to application 10/797,238 filed3/10/2004.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/8/2007 has been entered.

Response to Amendment

Amendments to claims 1, 14, 19, and 24 have been entered and acknowledged. Claims 1-35 remain pending in this application.

Claim Objections

Claim 2 objected to because of the following informalities: a period is required to conclude the claim. Appropriate correction is required.

Claims 13, 18, and 23 are objected to for being improper dependent claims. Any claim which is in dependent form but which is so worded that it, in fact is not, as, for example, it does not include every limitation of the claim on which it depends. Further, see MPEP 608.01 (n).

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 13, 18, and 23 are rejected under 35 U.S.C. 101 because the computer readable medium can be construed as a data signal or carrier wave per se which is not statutory (i.e. from Applicant's paragraph 0078). Claims that recite energy per se (i.e. a signal) are nonstatutory natural phenomena. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in 35 USC 101.

Claim 24 and its depending claims are rejected under 35 USC 101 for claiming a system (i.e. a machine) without the use of hardware being indicated.   If applicant intends to claim "A system for executing a file system statement..." as a machine, there needs to be some form of a structural part of a device or combination of devices as part of what is claimed. Otherwise, the claim is construed as software per se without being stored in memory or other computer readable storage medium. Software per se is functional descriptive material and is also not statutory under 35 USC 101. See MPEP 2106.01.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6, 14, 19, and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, the last lines of these claims (i.e. stating "if so..." and "if not...") is unclear as to what condition the lines are describing.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-11, 13-14, 16, 18, 20-21,23, and 25-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Bamford et al. ('Bamford' hereafter) U.S. Patent 5,870,758. In the following citations, drawings, and drawing references, Bamford teaches:

With respect to claim 1, A method for executing a file system statement in the context of a transaction, the method comprising:

receiving the file system statement (col. 1 line 21-22, col. 6 line 1-5, col. 7 line 56, and figure 2; i.e. a transaction) comprising a call to open (drawing reference 506) an item (col. 2, line 62, data item, and col. 6 line 10-14, data element), a call to read (col. 3 line 27) from the item (col. 2, line 62, data item, and col. 6 line 10-14, data element) or to write to the item (col. 2, line 62, data item, and col. 6 line 10-14, data element), and a call to close (col. 3 line 2-3, committing the transaction) the item (col. 2, line 62, data item, and col. 6 line 10-14, data element), the file system statement being independent of any database application programming interface requests (col. 2 line 9);

associating the file system statement (col. 1 line 21-22, col. 6 line 1-5, and figure 2; i.e. a transaction) with the transaction (figure 2, and col. 8 line 55-61); and

in response to receiving the file system statement (col. 1 line 21-22, col. 6 line 1-5, and figure 2; i.e. a transaction) that is independent of any database application programming interface requests (col. 2 line 9), starting the transaction by acquiring one of a read lock (col. 2 line 59-60) and a write lock (col. 2 line 60-62) on a data table row (drawing reference 404 and col. 6 line 9-11) corresponding to the item (col. 2, line 62, data item, and col. 6 line 10-14, data element).

With respect to claim 3, the method of claim 1, further comprising associating a second statement with the transaction (col. 3 line 60).

With respect to claim 4, the method of claim 3, comprising associating the second statement with the transaction, the second statement being another file system statement (col. 1 line 21-22, col. 3 line 60).

With respect to claim 5, the method of claim 3, comprising associating the second statement with the transaction, the second statement being a transactional query language statement (col. 3 line 56-60).

With respect to claim 6, the method of claim 1, wherein starting the transaction comprises:

determining whether starting the transaction will result in a conflict (col. 2 line 64, col. 7 line 59-61);

if so, then resolving the conflict according to a conflict resolution scheme (col. 7 line 61-57 and also col. 12 line 30-54, i.e. concurrency control); and

if not, then starting the transaction (co. 11 line 66-col. 12 line 6).

With respect to claim 7, the method of claim 1, wherein acquiring the read lock on the row comprises acquiring a read committed view of the row (col. 5 line 67, col. 6 line 55 and table 1 of column 2).

With respect to claim 8, the method of claim 1, wherein acquiring the write lock on the row comprises acquiring a write lock that will prevent another transaction from accessing the row while the transaction is being processed (col. 3 line 44, write locks).

With respect to claim 9 the method of claim 1, wherein acquiring the write lock on the row comprises acquiring a write lock that will prevent a non-transacted file system

statement from accessing the row while the transaction is being processed (col. 3 line 27).

With respect to claim 10, the method of claim 1, wherein acquiring the write lock on the row comprises acquiring a write lock that will prevent another statement within the transaction from writing to the row (col. 7 line 4-12, figure 14, and table 2 of col. 14).

With respect to claim 11, the method of claim 1, wherein acquiring the write lock on the row comprises acquiring a write lock that will enable another statement within the transaction to read from the row (col. 3 line 42-45).

With respect to claim 13, A computer readable medium having computer-executable instructions for performing the steps recited in claim 1 (col. 4 line 30).

With respect to claim 14, A method for locking and isolation of a file system statement, the method comprising:

receiving the file system statement (col. 1 line 21-22, col. 6 line 1-5, col. 7 line 56, and figure 2; i.e. a transaction) comprising a call to open (drawing reference 506) an item (col. 2, line 62, data item, and col. 6 line 10-14, data element), a call to read (col. 3 line 27) from the item (col. 2, line 62, data item, and col. 6 line 10-14, data element) or to write to the item (col. 2, line 62, data item, and col. 6 line 10-14, data element), and a call to close (col. 3 line 2-3, committing the transaction) the item (col. 2, line 62, data

item, and col. 6 line 10-14, data element), the file system statement being independent

of any database application programming interface requests (col. 2 line 9);

in response to receiving the file system statement (col. 1 line 21-22, col. 6 line 1-

5, and figure 2; i.e. a transaction) that is independent of any database application

programming interface requests (col. 2 line 9), determining if read access is available

(drawing reference 514 and col. 3 line 43-45) for a row of a data table corresponding to

the item (col. 2, line 62, data item, and col. 6 line 10-14, data element);

if not, then failing the open (col. 12 line 11-15); and

if so, then acquiring a read lock on the row (col. 12 line 30-54).

With respect to claim 16, the method of claim 14, wherein acquiring the read lock

on the row comprises acquiring a read committed view of the row (col. 5 line 67, col. 6

line 55 and table 1 of column 2).

With respect to claim 18, A computer readable medium having computer-

executable instructions for performing the steps recited in claim 14 (col. 4 line 30).

With respect to claim 19, A method for locking and isolation of a file system

statement, the method comprising:

receiving the file system statement (col. 1 line 21-22, col. 6 line 1-5, col. 7 line 56,

and figure 2; i.e. a transaction) comprising a call to open (drawing reference 506) an

item (col. 2, line 62, data item, and col. 6 line 10-14, data element), a call to read (col. 3

line 27) from the item (col. 2, line 62, data item, and col. 6 line 10-14, data element) or

to write to the item (col. 2, line 62, data item, and col. 6 line 10-14, data element), and a call to close (col. 3 line 2-3, committing the transaction) the item (col. 2, line 62, data item, and col. 6 line 10-14, data element), the file system statement being independent of any database application programming interface requests (col. 2 line 9);

in response to receiving the file system statement (col. 1 line 21-22, col. 6 line 1-5, and figure 2; i.e. a transaction) that is independent of any database application programming interface requests (col. 2 line 9), determining if read access is available (drawing reference 514 and col. 3 line 43-45) for a row of a data table corresponding to the item (col. 2, line 62, data item, and col. 6 line 10-14, data element);

if not, then failing the open (col. 12 line 11-15); and

if so, then acquiring a read lock on the row (col. 12 line 30-54).

With respect to claim 21, the method of claim 19, wherein acquiring the write lock on the row comprises acquiring a write lock that will prevent another statement from accessing the row while the statement is being processed (col. 3 line 44, write locks).

With respect to claim 23, A computer readable medium having computer-executable instructions for performing the steps recited in claim 19 (col. 4 line 30).

With respect to claim 24, A system for executing a file system statement in the context of a transaction, the file system statement including a call to open an item, one of a call to read from the item and a call to write to the item, and a call to close the item, the system comprising:

a relational data engine (drawing reference 100) comprising a data table (col. 2 line 5) having a row (col. 6 line 12-14)corresponding to the item (col. 2, line 62, data item, and col. 6 line 10-14, data element);

a storage platform (drawing reference 107) built on the relational data engine (drawing reference 100), the storage platform (drawing reference 107) comprising means for associating the file system statement with the transaction (col. 1 line 21-22, col. 6 line 1-5, and figure 2; i.e. a transaction), and means for starting the transaction by acquiring one of a read lock (col. 2 line 59-60) and a write lock (col. 2 line 60-62) on a data table row (drawing reference 404 and col. 6 line 9-11) the file system statement (col. 1 line 21-22, col. 6 line 1-5, col. 7 line 56, and figure 2; i.e. a transaction) comprising a call to open (drawing reference 506) an item (col. 2, line 62, data item, and col. 6 line 10-14, data element), a call to read (col. 3 line 27) from the item (col. 2, line 62, data item, and col. 6 line 10-14, data element) or to write to the item (col. 2, line 62, data item, and col. 6 line 10-14, data element), and a call to close (col. 3 line 2-3, committing the transaction) the item (col. 2, line 62, data item, and col. 6 line 10-14, data element), the file system statement being independent of any database application programming interface requests (col. 2 line 9).

With respect to claim 26, the system of claim 24, wherein the storage platform further comprises means for associating a second statement with the transaction (col. 3 line 60).

With respect to claim 27, the system of claim 26, wherein the second statement is another file system statement (col. 1 line 21-22, col. 3 line 60).

With respect to claim 28 the system of claim 26, wherein the second statement is a transactional query language statement (col. 3 line 56-60).

With respect to claim 29, the system of claim 24, wherein the means for starting the transaction comprises means for performing the following steps:

determining whether starting the transaction will result in a conflict (col. 2 line 64, col. 7 line 59-61);

if so, then resolving the conflict according to a conflict resolution scheme (col. 7 line 61-57 and also col. 12 line 30-54, i.e. concurrency control); and

if not, then starting the transaction (co. 11 line 66-col. 12 line 6).

With respect to claim 30, the system of claim 24, wherein the read lock provides a read committed view of the row (col. 5 line 67, col. 6 line 55 and table 1 of column 2)..

With respect to claim 31, the system of claim 24, wherein the write lock prevents another transaction from accessing the row while the transaction is being processed (col. 3 line 44, write locks).

With respect to claim 32, the system of claim 24, wherein the write lock prevents a non-transacted file system statement from accessing the row while the transaction is being processed (col. 3 line 27).

With respect to claim 33, the system of claim 24, wherein the write lock prevents another statement within the transaction from writing to the row (col. 7 line 4-12, figure 14, and table 2 of col. 14).

With respect to claim 34, the system of claim 24, wherein the write lock enables another statement within the transaction to read from the row (col. 3 line 42-45).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 12, 15, 17, 19, 22, 24, and 35 rejected under 35 U.S.C. 103(a) as being unpatentable over Bamford as applied to claims 1, 3-11, 13-14, 16, 18, 20-21,23, and 25-34 above in view of Reed et al ('Reed' hereafter) (U.S. Patent 7,035,874 B1.

With respect to claim 2 and similar claims 15, 19, and 24, Bamford fails to teach a data table row that includes a user defined type corresponding to the item.

Reed, however, teaches a data table row that includes a user defined type corresponding to the item (col. 4 line 19, i.e. a MediaUDT) for including a user defined type field (Reed at col. 1 line 14-16).

In the same field of endeavor, (i.e. data control), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because Reed would have given Bamford a user defined type field for a more robust system of including user defined data types.

With respect to claim 12, and similar claims 17, 22, and 35, Bamford fails to teach acquiring one of a read lock and a write lock on a filestream field of the row.

Reed, however, teaches acquiring one of a read lock and a write lock on a filestream field of the row (col. 4 line 55-58) for a reference to a media object.

In the same field of endeavor, (i.e. data control), it would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the teachings of Reed would have provided Bamford an efficient method to handle large object types, thus creating a more robust and complete system.

Response to Arguments

Applicant's arguments with respect to claims 1-35 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents/publications are concerned with data locking and control:

5,983,225 to Anfindsen.

2004/0064439 to Hinshaw et al.

6,009,426 to Jouenne et al.

2004/0117372 to Kasman.

6,604,102 to Klein et al.

6,772,155 to Stegelmann.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert M. Timblin whose telephone number is 571-272-5627. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert M. Timblin

Patent Examiner AU 2167

7/19/2007

JOHN COTTINGHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100